



**FUTURE DIRECTION & INITIATIVE APPROACHES FOR  
PORTS, SHIPPING & LOGISTICS IN MALAYSIA**

**CULTIVATING ADAPTABILITY & RESILIENCE IN THE MARITIME INDUSTRY**

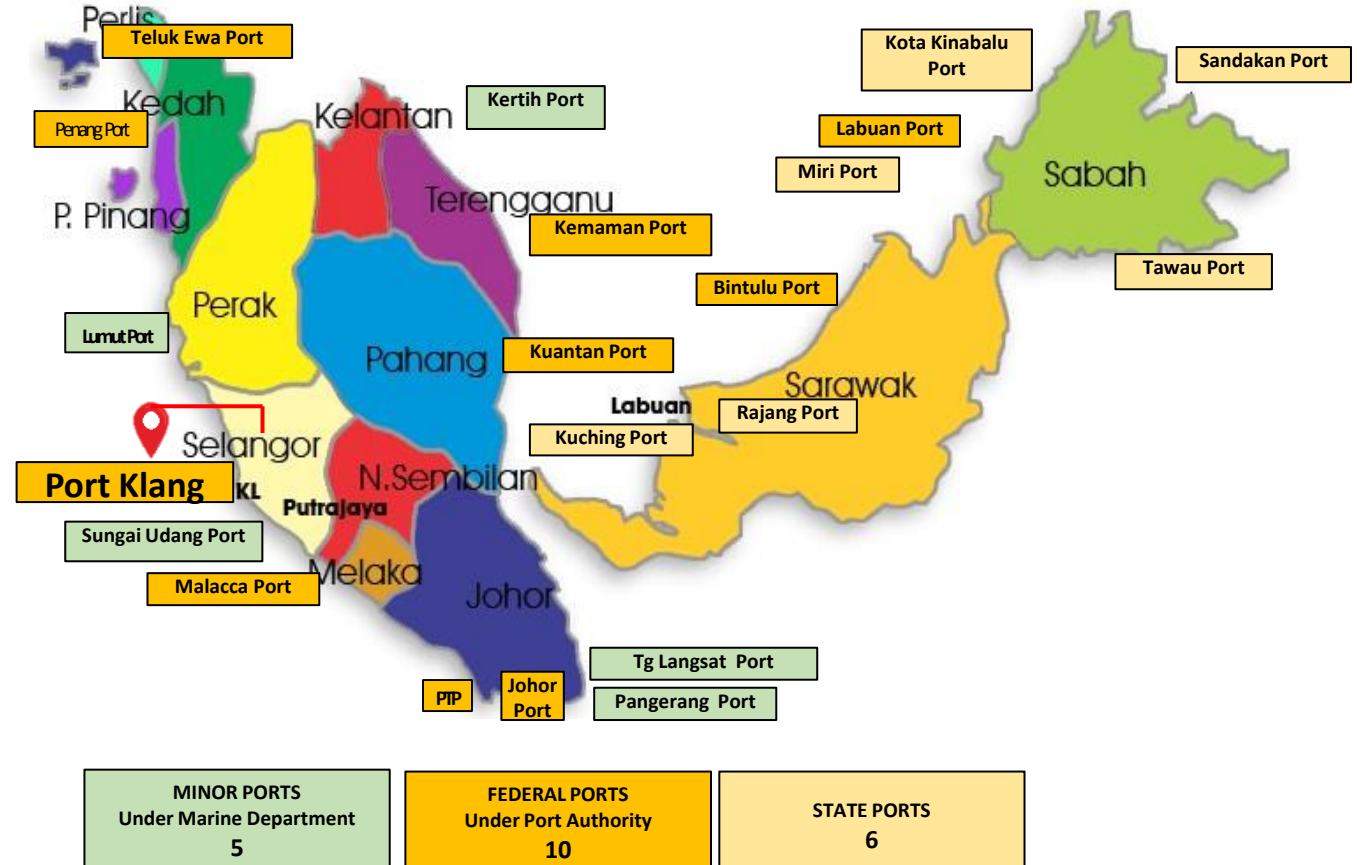
**PORT KLANG'S PERSPECTIVE**

**Presented by  
Capt. K. Subramaniam  
General Manager**

# Ports Overview

## MALAYSIA PORTS

## BIMP - EAGA



### The Brunei Darussalam–Indonesia–Malaysia–Philippines East ASEAN Growth Area



### TRADE BETWEEN PORT KLANG – BIMP EAGA 2021

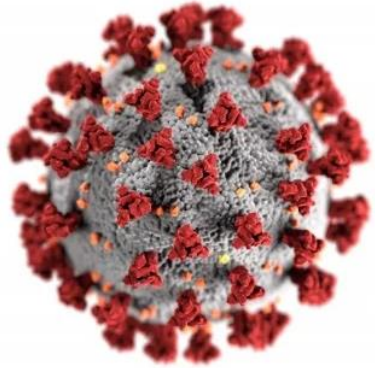
**2,020,971 TEUs**

BRUNEI : 30,359    INDONESIA: 728,537    MALAYSIA: 1,203,571  
PHILIPPINES: 58,504

**MALAYSIA THROUGHPUT 2021**  
**28 MILLION TEUs**

**PORT KLANG THROUGHPUT 2021**  
**13.7 MILLION TEUs**

# Recent Challenges in Shipping, Ports & Logistics



COVID-19 Pandemic



Disruptions In Supply Chain



Shortage of Capacity  
- Long Staying Containers  
- Congestion at Port Terminals



Russia – Ukraine War



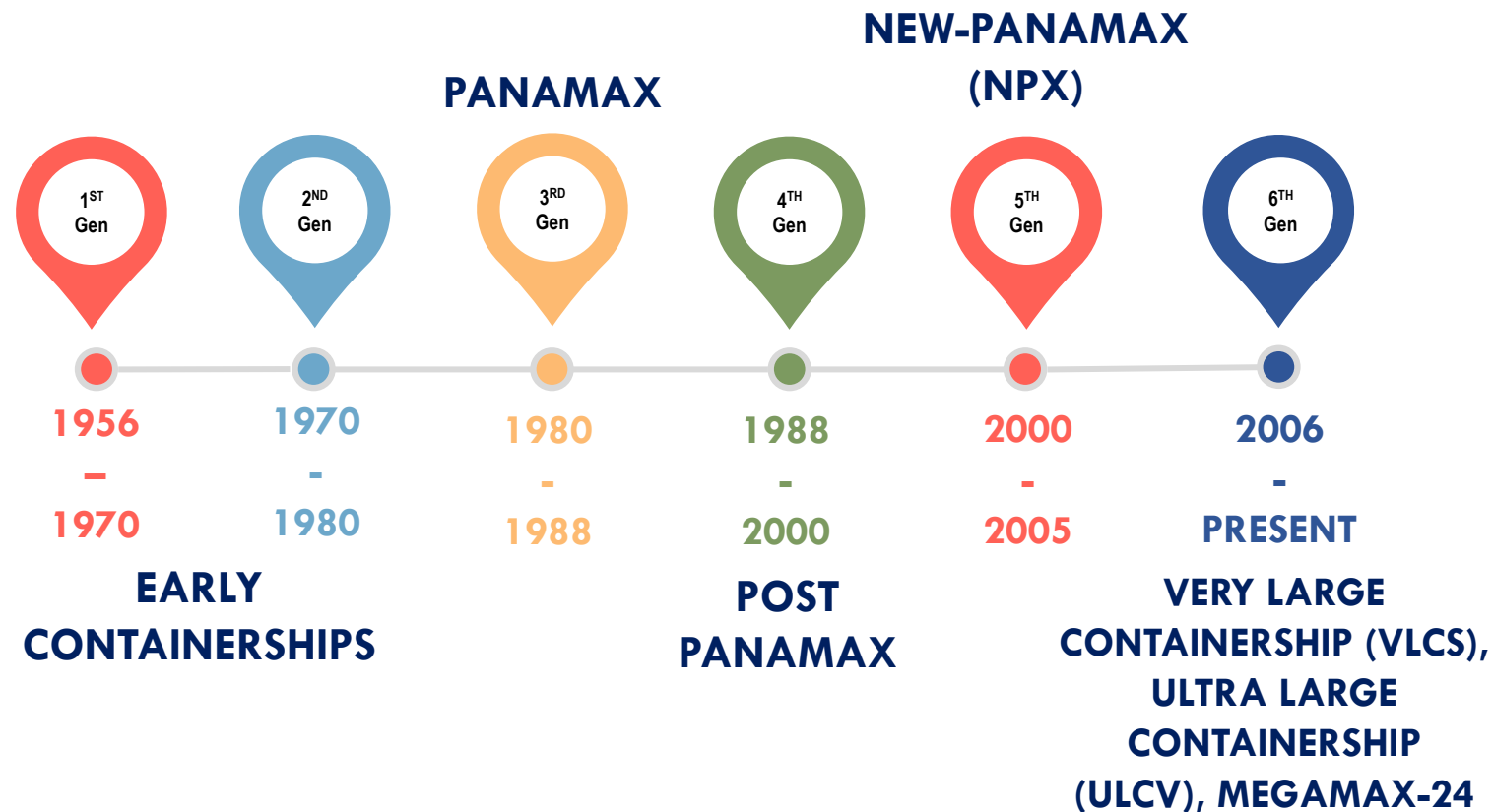
Fuel Price Increase

## IMPACT

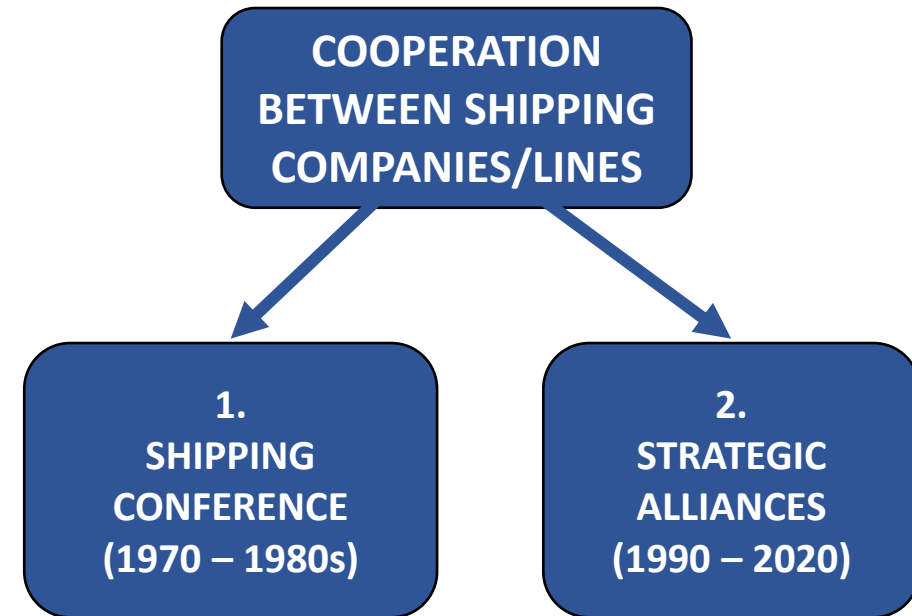
- Freight Rate Increase
- Congestion at Port
- Shortage of Containers
- Freight Rate Increase

# CHANGES AND EVOLUTION OF THE GLOBAL MARITIME AND SHIPPING INDUSTRY

## EVOLUTION OF CONTAINER VESSELS (SIZE)



## MERGER & ALLIANCES



### 3 MAJOR SHIPPING ALLIANCES (Post 2016)

- THE Alliance (Hapag-Lloyd, ONE, and Yang Ming)
- Ocean Alliance (COSCO, OOCL, CMA CGM, and Evergreen)
- 2M Alliance (Maersk, Hamburg Sud and MSC)

## STATE OF GLOBAL SHIPPING

### IMPACT OF ALLIANCES (Before COVID-19)

**1 RATIONALIZATION OF SHIPPING SERVICES**  
Strategic alliances will increase service frequencies and carriage capacities between hub ports on the long hauls.

**HUB AND FEEDER PORTS 2**  
Feeder networks and feeder vessel sizes have also grown as shipping alliances most often choose 1 or 2 major hub ports in the region.

**3 PRIMARY / SECONDARY HUBS**  
Port Klang has been chosen secondary hub by many lines as they experienced delay due to congestion in Singapore.

**IN REALITY - EXCESS OF SHIPPING CAPACITY 4**

**5 LOW FREIGHT RATES**

### IMPACT OF ALLIANCES (During & Post COVID-19)

**1 SUDDEN DEMAND FOR SHIPPING SERVICES**

**2 TRADE IMBALANCE AND SUPPLY CHAIN DISRUPTION**

**3 SHARP INCREASE IN FREIGHT RATE**

### FINANCIAL WINDFALL FOR SHIPPING LINES

- Diversification into logistics business: Air Freight , Total Logistics (LF Logistics – Maersk , CEVA Logistics - CMA CGM , Bolloré Logistics – MSC)
- Investment into new buildings (1,311 Ship Orders from 2020 to 2023)

## ISSUES DURING COVID-19

1



### Health Risk & Restrictions

- Port workers face risk of infection
- SOPs imposed reduced workforce productivity
- Risk of infection of new variants from ship crew

3



### Congestion at Port

- Stringent quarantine and health controls
- Congestion/closure of destination ports
- Increase in cargo dwell time
- Port efficiency & productivity affected
- Inland Cargo distribution disrupted

5



### Shortage of Containers

- Disruption in logistics services in Europe & US
- Backlog of undelivered containers in ports
- Detained containers at customer's premise
- High demand from exporters in China

2



### Shipping Demand Increased

- **90%** of the world goods are carried by sea
- Increase in consumer consumption
- Alternate spending in lieu of lifestyle and travel
- Increase in demand for port & logistics services
- Increase in demand for digital services

4



### Crew Change & Medical Evacuation

- Normal crew change affected
- Limited resources on board

6



### Freight Rate Increase

- Freight at all time high
- China exporters willing to pay premium
- Shortage of vessel slots at other ports
- Fluctuating & Mismatch in supply & demand especially between Asia/ Europe/ North America

What is Lacking ?





## INFRASTRUCTURE / CAPACITY BUILDING

- CONTINUOUS CAPACITY BUILDING
- HINTERLAND INFRASTRUCTURE DEVELOPMENT
- CHANNEL & WHARF DREDGING
- SAFE & SECURE WATERWAY – VTMS
- AUTOMATION (FOR FUTURE TERMINAL)



## REGULATORY GOVERNANCE

- INSTITUTIONAL FRAMEWORK
- LAW & LEGISLATION
- POLICY & STRATEGY
- GUIDELINES & SOP
- INITIATIVES & PROGRAMS



## DIGITIZATION & DIGITALIZATION

- PORTS & LOGISTICS COMMUNITY SYSTEM ACROSS SUPPLY CHAIN
- E-COMMERCE
- DIGITAL FREE TRADE ZONE (DFTZ)
- BIG DATA ANALYSIS FOR FORECASTING & FUTURE PLANNING
- EFFICIENT HAULIER MOVEMENTS –
  - CARGOMOVE,
  - LINKHAUL



## TRANSFORMATION OF WORKFORCE

- CENTER OF EXCELLENCE
- IN-HOUSE TRAINING & CERTIFICATION
- UPGRADE SKILL & MULTITASKING
- COLLABORATIONS WITH HIGHER LEARNING INSTITUTIONS



## DECARBONIZATION

- EMISSION & GHG REDUCTION
- ALTERNATE FUEL. eg: LNG FOR TERMINAL TRUCKS
- E-EQUIPMENT – RTG, QUAY CRANE
- LED LIGHTING / SOLAR POWER / ENERGY EFFICIENT COOLING SYSTEM
- ONSHORE POWER SUPPLY FOR SHIPS AT NEW BERTHS
- WATER RESOURCE MANAGEMENT
- 3R (REDUCE, REUSE, RECYCLE)



# CONTINUOUS CAPACITY BUILDING PORT KLANG



- **NORTHPORT RE-ENGINEERING PLAN**

- ✓ NDSB2 Integrated Logistics Hub
- ✓ Regional Distribution Centre
- ✓ Total net-lettable area: 350k sqft
- ✓ Development of new container yard to increase capacity by 560,000 TEUs

- **LPG STORAGE & DISTRIBUTION HUB**

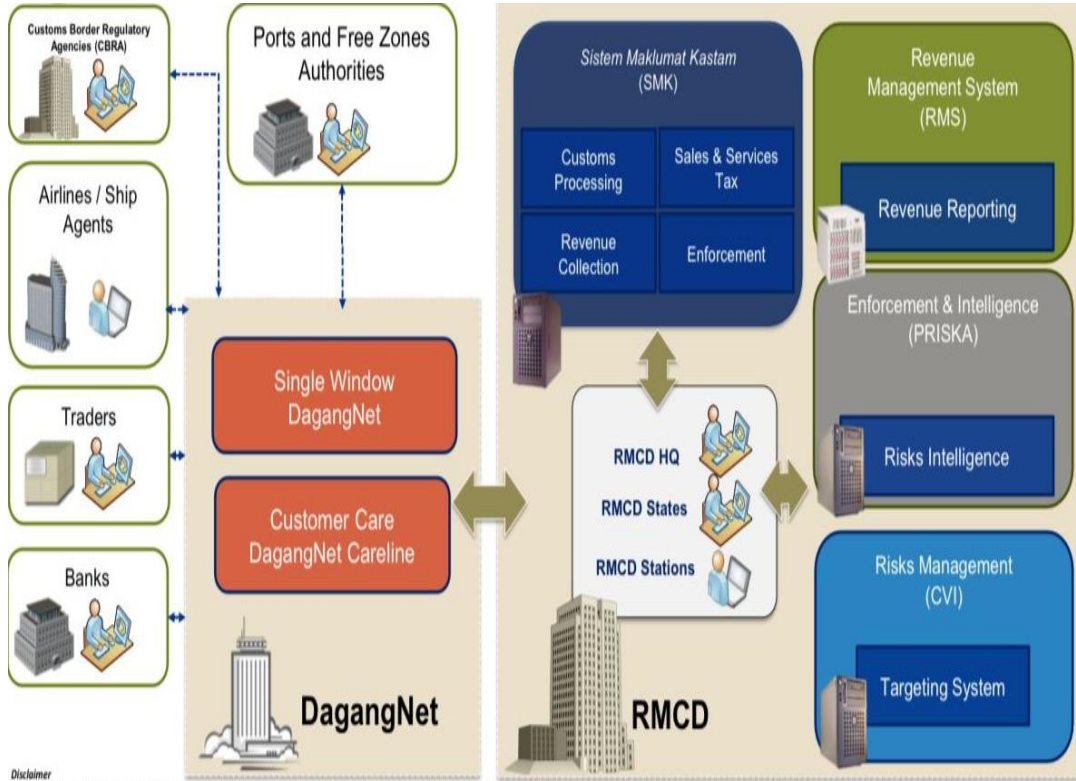
- ✓ Dedicated berth at LBTS to cater both LPG & LNG ships

- **WESTPORTS EXPANSION**

- ✓ To add 4.8km berth
- ✓ Additional handling capacity 13 million TEUs
- ✓ Dedicated green area
- ✓ Garden port & Green construction operations

- **3<sup>RD</sup> TERMINAL (CAREY ISLAND)**

- ✓ Natural deep water of 20-metre
- ✓ Basin design for land optimization
- ✓ Integrated Port City Development
- ✓ Manufacturing Hub & Logistics Distribution Centre



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**MERCHANT SHIPPING (COLLISION REGULATIONS)  
(RULES FOR VESSELS NAVIGATING THROUGH  
THE STRAITS OF MALACCA AND SINGAPORE)  
ORDER 1984**  
[P.U. (A) 439/1984]

In exercise of the powers conferred under section 252 of the Merchant Shipping Ordinance 1952, the Minister makes the following order:

**1. Citation.**  
This Order may be cited as the Merchant Shipping (Collision Regulations) (Rules for Vessels Navigating through the Straits of Malacca and Singapore) Order 1984.

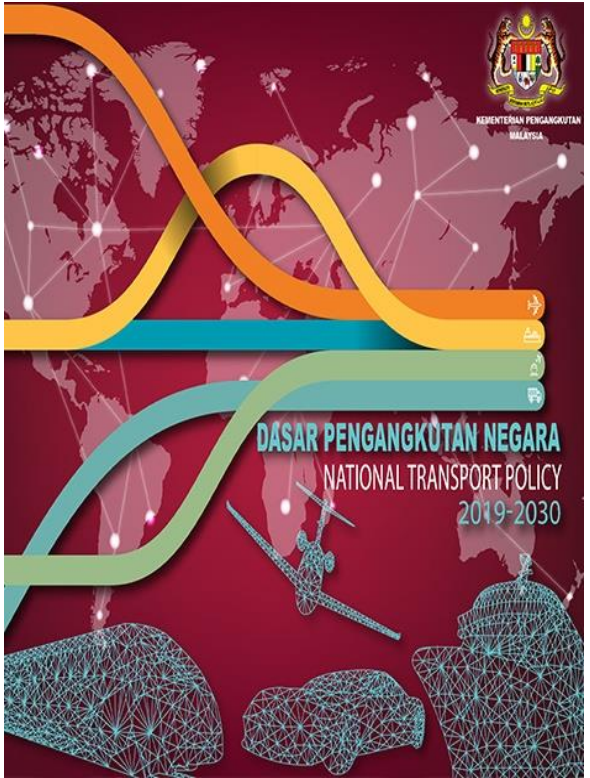
**2. Collision regulations.**  
(1) The Rules for Vessels Navigating through the Straits of Malacca and Singapore as set out in Annex V of Resolution A. 375 (X) of the Assembly of the International Maritime Organization adopted on 14th November 1977 and as amended by Resolution A. 476 (XII) of the Assembly adopted on the 19th November 1981 set out in the Schedule to this Order shall constitute and have effect as the collision regulations for the purposes of the Ordinance.  
(2) This Order shall be in addition to and not in substitution for the Merchant Shipping (Collision Regulations) 1984.

SCHEDULE  
(Paragraph 2)  
ANNEX V  
RULES FOR VESSELS NAVIGATING THROUGH THE STRAITS OF MALACCA AND SINGAPORE

**1. DEFINITION**  
For the purpose of these Rules the following definitions should apply:

1. A vessel having a draught of 15 metres or more shall be deemed to be a deep draught vessel.
2. A tanker of 150,000 dwt and above shall be deemed to be a Very Large Crude Carrier (VLCC).

NOTE — The above definitions do not prejudice the definitions of "vessel constrained by her draught" described in Rule 3 (b) of the International



## Customs & Port Authority Today

## Law & Legislation / Policies / Strategy

- Harmonization of Policy & Law which is not inline with current trend practices.
- Simplified regulations for more business friendly environment.



### SINGLE MARITIME WINDOW

#### Deliverable 1

Vessel Clearance System

#### Deliverable 2

Cargo Tracking & Tracing System

#### Deliverable 3

Trade Exchange Portal to be Incorporated with Custom Clearance System

# DIGITIZATION & DIGITALIZATION

## Example of Digitization & Digitalization Activities at Terminals

**Before 2014**

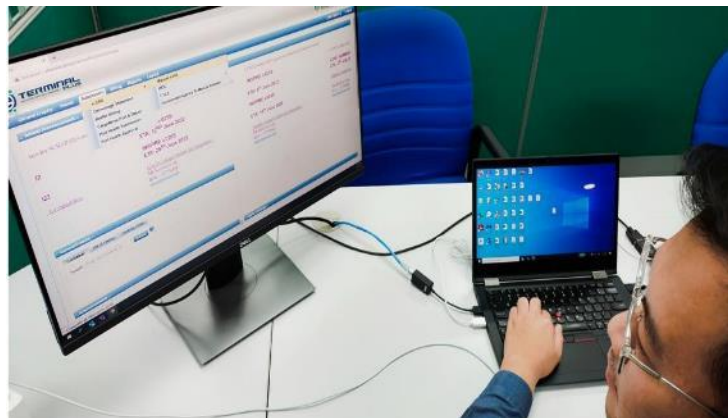


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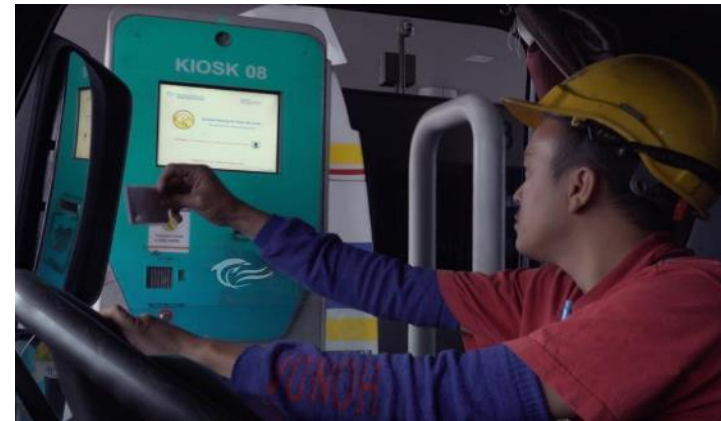


Hardcopy submission

**NOW**



Online Application



E-gate

### Other Activities:

- Smart Card Security System (SCSS)
- Centralised Berth Allocation System (CBAS)
- Document Management System (DMS)
- Internal Trucking System (WIT)
- Conventional Gate System (iTap)
- Remote Gate System (RGS)
- Remote Reefer Monitoring System (RMS)
- CargoMove & Haulier Booking System

**AND MANY MORE.....**



NICE is a unit under Northport’s Human Capital Division, providing training and development programs that are aligned to the needs of the business, especially the ports and logistics related programs which are anchored to the key corporate strategies and organization values.

Westports have onsite facilities with computers to conduct various workshops and trainings to allow our employees to learn conveniently new technologies and surrounding transformations as they work. All employees will be required to attend 2 trainings in a year.

Port Klang Authority (PKA) has been actively involved in staff training and exchange program (physically & virtually) between sisterports to upskill staff’s knowledge on new technologies and best practices. PKA also have in-house training. All staffs required to attend at least 3 training / courses / workshops.

TO UPSKILL KNOWLEDGE & ABLE TO PERFORM BEYOND SCOPE OF WORK

# DECARBONIZATION

## GREEN PORT INITIATIVES

### RENEWABLE ENERGY & LOW CARBON FUEL

- Solar panel on warehouse rooftops
- LNG bunkering

### ENVIRONMENT PROTECTION

- Dedicated waste management centre
- Ambient air and water quality monitoring
- Ship waste water treatment plant

### GREENING THE ENVIRONMENT

- Garden port
- Mangrove rehabilitation

### ENVIRONMENTALLY FRIENDLY EQUIPMENT & FACILITIES

- Replacement of Diesel RTG with E-RTG
- Replacement of conventional light with LED light

### FUTURE PROJECTS

- LNG powered trucks and tug boats
- Electric forklifts
- Onshore power supply at new berths
- Waste to energy plant
- Port call optimisation Green Voyage 2050



**FUTURE OF PORTS / SHIPPING / LOGISTICS WILL BE BASED ON**

**RESILIENCE**  
Industries being more resilient to withstand disruptions & Incorporate technology to build the resilient.



**DIGITALIZATION**  
Use of digitalization to expedite transactions & improve business flow.



**DECARBONIZATION**





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**THANK YOU**